

CLAIMS

1. A method for altering a header of an incoming frame entering a network node to a modified header of an outgoing frame leaving the network node, the header having a layered structure, the method comprising the steps of:
 - assigning frame alteration commands at relative positions with respect to the layered structure;
 - adjusting the relative positions of the frame alteration commands to adjusted relative positions, in correspondence to previously assigned frame alteration commands with respect to the same layer; and,
 - translating the adjusted relative positions to absolute positions for sequentially executing the frame alteration commands in a frame alteration unit.
2. A method as recited in claim 1, wherein the step of translating is performed in dependence on a packet information structure comprising layer starting positions and on content of the frame alteration commands.
3. A method as recited in claim 2, wherein the step of adjusting is performed in dependence on content of the frame alteration commands.
4. A method as recited in claim 2, comprising generating the layer starting positions by a parser unit.
5. A method as recited in claim 2, comprising appending further layer starting positions to the packet information structure by a processing unit.
6. A method as recited in claim 1, wherein the frame alteration commands comprise a respective layer number.
7. An apparatus for altering a header with layered structure of an incoming frame entering a network node to

a modified header of an outgoing frame leaving the network node, the apparatus comprising:

an assignment unit for assigning frame alteration commands at relative positions with respect to the layered structure;

an adjustment unit for adjusting the relative positions of the frame alteration commands to adjusted relative positions, in correspondence to previously assigned frame alteration commands with respect to the same layer; and

a translation unit for translating the adjusted relative positions to absolute positions for sequential execution of the frame alteration commands.

8. An apparatus as recited in claim 7, wherein the translation unit is responsive to a packet information structure comprising layer starting positions and to content of the frame alteration commands.

9. An apparatus as recited in claim 8, wherein the adjustment unit is responsive to content of the frame alteration commands.

10. An apparatus as recited in claim 8, comprising a parser unit for generating the layer starting positions.

11. An apparatus as recited in claim 8, wherein the frame alteration commands comprise a respective layer number.

13. An apparatus as recited in claims 8, comprising processing logic.

14. An apparatus as recited in claim 13, wherein the assignment unit, the adjustment unit and the translation unit are implemented in the processing logic.

15. An apparatus as recited in claim 13, comprising a frame alteration unit connected to the output of the processing logic for sequential execution of the frame

alteration commands.

16. An apparatus as recited in claim 15, wherein the translation unit is implemented in the frame alteration unit, and the assignment unit and the adjustment unit are implemented in the processing logic.

17. An apparatus as recited in claim 16, wherein the translation unit and the adjustment unit are implemented in the frame alteration unit, and the assignment unit is implemented in the processing logic.

18. An apparatus as recited in claim 13, wherein the processing logic comprises a plurality of processing units.

19. A program storage device readable by a digital processing apparatus and having a program of instructions which are tangibly embodied on the storage device and which are executable by the processing apparatus to perform a method of altering a header of an incoming frame of network node to a modified header of an outgoing frame, the method comprising:

assigning frame alteration commands at relative positions with respect to the layered structure; adjusting the relative positions of the frame alteration commands to adjusted relative positions, in correspondence to previously assigned frame alteration commands with respect to the same layer; and

translating the adjusted relative positions to absolute positions for sequentially executing the frame alteration commands in a frame alteration unit.